*The Age-Old Struggle against the Antivaccinationists*

* Referenced from the ***New England Journal of Medicine 2011 ; 364:97-99***

Introduction

Since the introduction of the first vaccine, there has been opposition to vaccination

These words above are quoted from a famous article ***The Age-Old Struggle against the Antivaccinationists***in ***the New England Journal of Medicine*** . Although medical and scientific evidence surrounding vaccination demonstrate that the benefits of preventing suffering and death from infectious diseases far outweigh rare adverse effects of immunization, there were still lots of vaccination controversies exists in the world . Reported from Wikipedia [2] , antivaccinationists usually claim that vaccines do not work, that they are or may be dangerous, that individuals should rely on personal hygiene instead, or that mandatory vaccinations violate individual rights or religious principles. These arguments have reduced vaccination rates in certain communities, resulting in epidemics of preventable, and sometimes fatal, childhood illnesses . For example , in 19 century , despite clear evidence of benefit, routine inoculation with cowpox to protect people against smallpox was hindered by a burgeoning antivaccination movement. The result was ongoing smallpox outbreaks and needless deaths after .

In this summary article , we’ll review the history of the antivaccination and discuss some perspectives related to it .

The Beginning of antivaccination

It has been reported that since the 18th century, fear and mistrust have arisen every time a new vaccine has been introduced .

Between 1940s to 1980s , the antivaccination movements used to be nearly disappear because of three trends :

* a boom in vaccine science, discovery, and manufacture
* public awareness of widespread outbreaks of infectious diseases (measles, mumps, rubella, pertussis, polio, etc) and the desire to protect children from these highly prevalent ills
* a baby boom, accompanied by increasing levels of education and wealth

However , with fewer highly visible outbreaks of infectious disease threatening the public, and the media widely sway public opinion and distract attention from scientific evidence which were all harmful to vaccines, antivaccine thinking began flourishing once again in the 1970s .

So reasonably that the media should be to blame that the following events , including two worldwide ones , occurred , leaving almost a scar forever to the vaccine’s acceptance to the society .

The growth factors of antivaccination movements

Just like we have saw before , after 1970s , a series of scandals for vaccine using had help the antivaccine thoughts begin flourishing up again . Among those event , the DPT event and the MMR vaccine controversy should be the most worthy to be mentioned .

The DPT event

In 1982 , a television names “DPT: Vaccine Roulette” reported a litany of unproven claims , which launched a huge debate to the use of DPT vaccine . Not only this , according to a report on the Website “Homeopathy Safe Medicine”[3] , in about early 1990s , "A Shot in the Dark: why the P in the DPT vaccination may be hazardous to your children's health", and "Vaccination: Social Violence and Criminality: The medical assault on the American brain" were also printed , both paint an alarming picture of the dangers of the vaccination .

After these events , the public had become more focus about the risks of the disease and usually focused on adverse events associated with vaccination . Many countries dropped their programs of universal DPT vaccination in the face of public protests , even though there had been a period in which pertussis had been well controlled through vaccination . A survey conducted in 1998 shows that , in the 1970s and 1980s , countries that dropped routine pertussis vaccination had suffered 10 to 100 times more the pertussis incidence than those maintained high immunization rates . In the United States, vaccine manufacturers faced an onslaught of lawsuits, which forced them to cease vaccine production , leading to a program called Vaccine Injury Compensation Program (VICP) in order to keep them alive .

The MMR vaccine controversy

MMR vaccine probably is one of the most serious public health disaster for vaccine , and also bring huge impact to the public health . According to the Wikipedia , a 2011 journal article described the vaccine-autism connection as "the most damaging medical hoax of the last 100 years" [4][5].

In February 1998 , a research group led by Andrew Wakefield published a paper , which has been proved to be fraudulent now , in a British medical journal – *The Lancet* . This paper reported on twelve children with developmental disorders referred to the Royal Free Hospital. The parents or physicians of eight of these children were said to have linked the start of behavioral symptoms to MMR vaccination . This fraudulent research , unfortunately , was the very main factor bringing the terrible disaster in public health .

About between 2001 and 2002 , the controversy began to become momentum because of the consecutive supporting researches gradually released by some famous journals , such as a laboratory had claimed that they had found measles virus in tissue samples taken from children who had Autism and bowel problem . . It was the biggest science story of 2002, with 1257 articles mostly written by non-expert commentators. A social statistical survey shows that as a result of the scare, full confidence in MMR fell from 59% to 41% after publication of the Wakefield research. In 2001, 26% of family doctors felt the government had failed to prove there was no link between MMR and autism and bowel disease .

Since 2003 , the antivaccination movements of MMR vaccine generally decreased because of a series of scandals about Wakefield’s research . Among them , the main three events are : the request of retraction of interpretation , the report of manipulating of data , and a complete investigation led by GMC(General Medical Council) , which formally proved that Wakefield’s research was fraudulent .

With many people’s effort , about three to two years ago , this terrible debate was finally be solve by science , however , it also brought a huge impact to the world . According to an estimate by AOL's *Daily Finance* in 2011 , the disease outbreak can be listed below :

* A 2002–2003 outbreak of measles in Italy –

*"which led to the hospitalizations of more than 5,000 people, had a combined estimated cost between 17.6 million euros and 22.0 million euros".*

* A 2004 outbreak of measles from India –

*"an unvaccinated student returning from India in 2004 to Iowa was $142,452" .*

* A 2006 outbreak of mumps in Chicago –

*"caused by poorly immunized employees, cost the institution $262,788, or $29,199 per mumps case."*

* A 2007 outbreak of mumps in Nova Scotia cost $3,511 per case.
* A 2008 outbreak of measles in San Diego, California cost $177,000, or $10,376 per case.

We can see , from above survey , the MMR vaccine controversy really brought huge impact to our society .

Today’s antivaccination

From above , we have briefly taken a little look at the history of antivaccination . Now , let us discuss the current status in our society .

Today, the spectrum of antivaccinationists has ranged from people who are simply known little about science to radical fringe people who use deliberate mistruths, intimidation, falsified data, and threats of violence in efforts to prevent the use of vaccines .

Antivaccinationists tend toward complete mistrust of those whoever believe of the safety of the vaccine . Their efforts have had brought the society costly effects .

H1N1 vaccine controversy

In 2009 and 2010 , when H1N1 Influenza virus were widely torturing the whole world , a strong public fear of vaccination was again revealed by antivaccinationists , added with the Wakefield’s demonstration , the public was steered away from the vaccine . As a result , a generation of parents and their children have grown up afraid of vaccines, and the outbreaks of measles and mumps have appeared again , destroying many young lives .

A small conclusion

People are easily to be instigated . Therefore , media who have had swayed poor science or those who have had made the wrong researches should all be to blame for no matter which disease outbreak we have mentioned before .

In the next section , we’ll see a method that the author proposed in order to hasten the antivaccination’s funeral .

To hasten the antivaccination’s funeral

Step 1 - Publish high-quality studies to investigate concerns about vaccine safety

One of the most important factors lead to antivaccination is the poor or even fraudulent researches . Without the true science , the public could never completely recognize the validity of the vaccine . Thus , we must continue to pay more effort to do high-quality researches to prove the vaccine validity .

Step 2 – Launch monitoring programs

The mission of the monitoring system is to ensure coverage of real but rare adverse events that may be related to vaccination . For example , as the author mentioned , the Vaccine Adverse Events Reporting System (VAERS) .

Step 3 – More strict profession education and media ethics

The scientific method must inform evidence-based decision making because syncretism between the scientific method and unorthodox medicine can be dangerous . And the media should report if good public policy decisions are to be made and the public health held safe .

Step 4 - Proper education to public

As the author mentioned , public–private partnerships of scientists and physicians should be developed to make accurate vaccine information accessible to the public in multiple languages . Public knowledge about vaccine should also be enhanced , to give every one fundamental ability to decide the use of vaccine .

Conclusion

Despite hundreds of thousands of antivaccination movements having occurred so far , the true is that the diseases that we now seek to prevent with vaccination have been proved to pose far less risk to antivaccinationists than smallpox did before . A long history of stunning triumphs, such as the eradication of smallpox and control of many epidemic diseases have proved this perspective . On the other hand, the reality that none of the antivaccinationists' claims of widespread injury from vaccines have withstood the tests of time and science .

Here , we quote a sentence which the author mentioned to express his thought :

We believe that antivaccinationists have done significant harm to the public health. Ultimately, society must recognize that science is not a democracy in which the side with the most votes or the loudest voices gets to decide what is right.

Reference

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